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Review for N111 exam #2

Chapter 21: Drugs for Neuromuscular Disorders

* Causes of muscle spasms
  + Overmedication with antipsychotic drugs
  + Epilepsy
  + Hypocalcemia
  + Pain
  + Debilitating neurologic disorders
* Pharmacologic and Nonpharmacologic Treatment of muscle spasms
  + Massage
  + Application of heat and cold
  + Hydrotherapy
  + Supervised exercises
* Centrally acting skeletal muscle relaxants
  + Many muscle relaxants generate their effects by inhibiting motor neurons within brain and/or spinal cord.
* Treating muscle spasms at the level of the CNS
  + Their effects within the brain and/or spinal cord by inhibiting upper motor neuron activity causing CNS depressant effects, or altering simple spinal reflexes
* Clobenzaprine hydrochloride (Cycoflex, Flexeril)
  + Adverse Effects
    - Drowsiness
    - Blurred vision
    - Dizziness
    - Dry mouth
    - Rash
    - Tachycardia
  + Treatment of overdose
    - IV administration of 1 to 3 mg of physostigmine salicylate is reported to reverse symptoms of poising of drugs with anticholinergic activity. Physostigmine may be helpful in the treatment of cyclobenzaprine overdose
* Spasticity
  + Condition in which certain muscle groups remain in a continuous state of contraction, usually resulting from damage to the CNS
  + Stiff with increased muscle tone
* Direct-acting antispasmodics
  + Centrally acting drugs in the treatment of general muscle spasms
    - Baclofen (Lioresal)
    - Dantrolene (Dantrium) is a direct-acting drug
      * Adverse Effect
        + Muscle weakness
        + Dizziness
        + Diarrhea
        + Hepatic necrosis
* Treating muscle spasms directly at the muscle tissue
  + Dantrolene relieves spasticity by interfering with the release of calcium ions in skeletal muscle.
  + Botulinum toxin type B (Myobloc)
    - Used to offer significant relief of symptoms to people with dystonia
    - Administer in low doses
* Neuromuscular blockers
  + Bind to nicotinic receptors located on the surface of skeletal muscle fibers
  + Interfere with the binding of acetylcholine
  + Depolarizing blockers bind to the acetylcholine receptor and produce a state of continuous depolarization
* If there is an adverse effect CALL THE DOCTOR! If serious adverse effect stop the drug right away.
* Patients receiving drugs for muscle spasms or spasticity (page 276 )
  + Planning: Patient Goals and Expected Outcomes
    - The patient will:
    - Experience therapeutic effects dependent on the reason the drug is being given (e.g., decreased muscle spasm and pain, improved physical mobility and coordination, and increased ability in self-care activities)
    - Be free from, or experience minimal adverse effects
    - Verbalize an understanding of the drug’s use, adverse effects, and required precautions
    - Demonstrate proper self-administration of the medication (e.g., dose, timing, when to notify provider).
  + Implementation
  + Interventions and (Rationales)
    - Ensuring therapeutic effects:
      * Drug therapy may take several days to have the full effect with lessening pain and tenderness, increased range of motion, and an increased ability to complete ADLs noted. Support the patient in self-care activities as necessary until improvement is observed. (An ability to carry out ADLs gradually improves with consistent usage.)